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RAW SEQUENCE LISTING DATE: 05/22/2002
PATENT APPLICATION: US/09/900,345A TIME: 11:27:26

Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\I900345A.raw

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         Zhou, Jian
 6 <120> TITLE OF INVENTION: METHOD AND POLYNUCLEOTIDES FOR DETERMINING TRANSLATIONAL
         EFFICIENCY OF A CODON
 9 <130> FILE REFERENCE: 10338-5US
11 <140> CURRENT APPLICATION NUMBER: 09/900,345A
12 <141> CURRENT FILING DATE: 2001-07-06
14 <150> PRIOR APPLICATION NUMBER: AU PP8078
15 <151> PRIOR FILING DATE: 1999-01-08
17 <150> PRIOR APPLICATION NUMBER: PCT/AU00/00008
18 <151> PRIOR FILING DATE: 2000-01-07
20 <160> NUMBER OF SEQ ID NOS: 185
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27 <213> ORGANISM: Artificial Sequence
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42 Val Pro Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe
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45 tot gto ago gga gag ggt gaa ggt gat goo aca tao gga aag oto aco
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46 Ser Val Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr
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49 ctg aaa ttc atc tgc acc act gga aag ctc cct gtg cca tgg cca aca
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53 ctg gtc act acc ttc tct tat ggc gtg cag tgc ttt tcc aga tac cca
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54 Leu Val Thr Thr Phe Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro
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57 gac cat atg aag cag cat gac ttt ttc aag agc gcc atg ccc gag ggc
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58 Asp His Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly
59
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61 tat gtg cag gag aga acc atc ttt ttc aaa gat gac ggg aac tac aag
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62 Tyr Val Gln Glu Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys

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Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\I900345A.raw

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							Asp										* · -
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Output Set: N:\CRF3\05222002\I900345A.raw

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140	Lys (	Gln	Lvs	Asn	Gly	Ile	Lys	Val	Asn	Phe	Lys	Ile	Arq	His	Asn	Ile	
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144			1	180					185		-1-			190			
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147		1	195	011				200					205				
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171 172 173 175 176 177 179 180 181 183 184 185 187 188 189 191	Met A gtc o Val I tct o Ser V ctg o Leu I ctg o Leu V 65	gcc Ala cca Pro gtc Val aaaa Lys 50 gtc Val cat	att Ile agc Ser 35 ttc Phe act Thr	gcc Ala ctc Leu 20 gga Gly atc Ile acc Thr	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln	Ala  gaa Glu  ggt Gly  acc Thr  tct Ser 70 cat	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac	Lys gat Asp ggt Gly 40 gga Gly ggc Gly	ggc Gly 25 gat Asp aag Lys gtg Val	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys	gtg Val aca Thr cct Pro tgc Cys 75 agc	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc	Phe ggg Gly gga Gly 45 cca Pro tcc ser	Thr cac His 30 aag Lys tgg Trp aga Arg ccc	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr	Val ttt Phe acc Thr aca Thr cca Pro 80 ggc	96 144 192 240
171 172 173 175 176 177 179 180 181 183 184 185 187 188 191 192 193	tct g Leu I  ctg g Leu I  Asp I	gcc Ala cca pro gtc Val aaa Lys 50 gtc Val cat His	att Ile agc Ser 35 ttc Phe act Thr atg Met	ctc Leu 20 gga Gly atc Ile acc Thr	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln 85	Ala  gaa Glu  ggt Gly  acc Thr  tct Ser 70 cat His	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac Asp	Lys gat Asp ggt Gly 40 gga Gly ggc Gly ttt Phe	ggc Gly 25 gat Asp aag Lys gtg Val ttc Phe	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys 90	gtg Val aca Thr cct Pro tgc Cys 75 agc Ser	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc Ala	Phe  999 Gly  99a Gly 45 cca Pro  tcc Ser atg Met	Thr cac His 30 aag Lys tgg Trp aga Arg ccc Pro	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr gag Glu 95	ttt Phe acc Thr aca Thr cca Pro 80 ggc Gly	96 144 192 240 288
171 172 173 175 176 177 179 180 181 183 184 185 187 191 192 193 195	tct of the lead of	gcc Ala cca pro gtc Val aaa Lys 50 gtc His	att Ile agc Ser 35 ttc Phe act Thr atg Met cag	ctc Leu 20 gga Gly atc Ile acc Thr aag Lys	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln 85 aga	Ala  gaa Glu  ggt Gly  acc Thr  tct Ser 70 cat His	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac Asp	Lys gat Asp ggt Gly 40 gga Gly ggc Gly ttt Phe	ggc Gly 25 gat Asp aag Lys gtg Val ttc Phe	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys 90 aaa	gtg Val aca Thr cct Pro tgc Cys 75 agc ser	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc Ala gac	999 Gly gga Gly 45 cca Pro tcc ser atg Met	Thr cac His 30 aag Lys tgg Trp aga Arg ccc Pro	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr gag Glu 95 tac	Val ttt Phe acc Thr aca Thr cca Pro 80 ggc Gly aag	96 144 192 240
171 172 173 175 176 177 179 180 181 183 184 185 187 191 192 193 195 196	tct g Leu I  ctg g Leu I  Asp I	gcc Ala cca pro gtc Val aaa Lys 50 gtc His	att Ile agc Ser 35 ttc Phe act Thr atg Met cag	ctc Leu 20 gga Gly atc Ile acc Thr aag Lys	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln 85 aga	Ala gaa Glu ggt Gly acc Thr tct ser 70 cat His	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac Asp	Lys gat Asp ggt Gly 40 gga Gly ggc Gly ttt Phe	ggc Gly 25 gat Asp aag Lys gtg Val ttc Phe	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys 90 aaa	gtg Val aca Thr cct Pro tgc Cys 75 agc ser	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc Ala gac	999 Gly gga Gly 45 cca Pro tcc ser atg Met	Thr  cac His 30 aag Lys  tgg Trp aga Arg  ccc Pro aac Asn	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr gag Glu 95 tac	Val ttt Phe acc Thr aca Thr cca Pro 80 ggc Gly aag	96 144 192 240 288
171 172 173 175 176 177 179 180 181 183 184 185 187 191 192 193 195 196	tct of Ser Val I Ctg of Leu I Ctg of Asp I tat of Tyr V	gcc Ala cca pro gtc Val aaa Lys 50 gtc Val cat His	att Ile agc Ser 35 ttc Phe act Thr atg Met cag Gln	ctc Leu 20 gga Gly atc Ile acc Thr aag Lys	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln 85 aga Arg	Ala  gaa Glu  ggt Gly  acc Thr  tct ser 70 cat His acc Thr	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac Asp atc Ile	Lys gat Asp ggt Gly 40 gga Gly ggc Gly ttt Phe	ggc Gly 25 gat Asp aag Lys gtg Val ttc Phe ttc Phe 105	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys 90 aaa Lys	glu gtg Val aca Thr cct Pro tgc Cys 75 agc Ser gat Asp	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc Ala gac Asp	Phe  999 Gly  9ga Gly 45 cca Pro  tcc ser atg Met  999 Gly	Thr  cac His 30 aag Lys  tgg Trp aga Arg  ccc Pro aac Asn 110	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr gag Glu 95 tac Tyr	ttt Phe acc Thr aca Thr cca Pro 80 ggc Gly aag Lys	96 144 192 240 288
171 172 173 175 176 177 179 180 181 183 184 185 187 191 192 193 195 196 197	tct of the lead of	gcc Ala cca pro gtc Val aaa Lys 50 gtc Val cat His	att Ile agc Ser 35 ttc Phe act Thr atg Met cag Gln gct	ctc Leu 20 gga Gly atc Ile acc Thr aag Lys gag Glu 100 gaa	gcc Ala 5 gtg Val gag Glu tgc Cys ttc Phe cag Gln 85 aga Arg	Ala gaa Glu ggt Gly acc Thr tct ser 70 cat His acc Thr	ser ctg Leu gaa Glu act Thr 55 tat Tyr gac Asp atc Ile ttc	Lys gat Asp ggt Gly 40 gga Gly ttt Phe ttt Phe	ggc Gly 25 gat Asp aag Lys gtg Val ttc Phe 105 ggt	Glu 10 gat Asp gcc Ala ctc Leu cag Gln aag Lys 90 aaa Lys gac	glu gtg Val aca Thr cct Pro tgc Cys 75 agc Ser gat Asp	Leu aat Asn tac Tyr gtg Val 60 ttt Phe gcc Ala gac Asp ctg	Phe  999 Gly  93a Gly 45 cca Pro  tcc ser atg Met  999 Gly  9t9	Thr  cac His 30 aag Lys  tgg Trp aga Arg  ccc Pro aac Asn 110 aat	Gly 15 aaa Lys ctc Leu cca Pro tac Tyr gag Glu 95 tac Tyr aga	Val ttt Phe acc Thr aca Thr cca Pro 80 ggc Gly aag Lys atc	96 144 192 240 288

RAW SEQUENCE LISTING. DATE: 05/22/2002 PATENT APPLICATION: US/09/900,345A TIME: 11:27:26

Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\1900345A.raw

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201			115					120					125				
203	gag	ctg	aag	ggc	att	gac	ttt	aag	gag	gat	gga	aac	att	ctc	ggc	cac	432
															Gly		
205		130					135			-	-	140			-		
	aan		паа	tac	aac	tat		tcc	cac	aat	ata		atc	atα	gcc	gac	480
	_	_	-														400
	-	Leu	GIU	TAT	ASII	_	ASII	ser	пте	ASII		тут	116	Met	Ala		
_	145					150					155	_				160	
															aac		528
212	Lys	Gln	Lys	Asn	Gly	Ile	Lys	Val	Asn	Phe	Lys	Ile	Arg	His	Asn	Ile	
213					165					170					175		
215	gag	gat	gga	tcc	gtg	cag	ctg	gcc	gac	cat	tat	caa	cag	aac	act	cca	576
															Thr		
217		-	-	180					185		-			190			
	atc	aac	gac		cct	ata	ctc	ctc		gac	aac	cat	tac	cta	tcc	acc	624
															Ser		
221	116	GIY	195	GIY	FIO	Vai	neu	200	FIO	изь	ASII	1113	205	шси	JCI	1111	
															~+~	~+~	672
															atg		672
	GIn		Ala	Leu	Ser	Lys		Pro	Asn	GLu	Lys		Asp	HIS	Met	Val	
225		210					215					220					
227	ctg	ctg	gag	ttt	gtg	acc	gct	gct	ggg	atc	aca	cat	ggc	atg	gac	gag	720
228	Leu	Leu	Glu	Phe	Val	Thr	Ala	Ala	Gly	Ile	Thr	${ t His}$	Gly	Met	Asp	Glu	
229	225					230					235					240	
		tac	aaσ	tga													732
	-	Tyr	_	- ,													
		)> SI	-	NO.	. 4												
		l> LI															
		2> TY			ŧ J												
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		3> 01			Arti	LITCI	Lal :	seque	ence								
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						LION:	: Des	scri	otio	n or	Art:	LIIC	Lal S	seque	ence	: Ala(C	GCC)5GFP
		)> SI											_	_	_	_	
244	Met	Ala	Ala	Ala	Ala	Ala	Ser	Lys	Gly	Glu	Glu	Leu	Phe	Thr	Gly	Val	
245	1				5					10					15		
247	Val	Pro	Ile	Leu	Val	Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	
248				20					25					30			
250	Ser	Val	Ser	Gly	Glu	Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	
251			35	-		-		40	•			-	45	-			
	Len	T.VS		Tle	Cvs	Thr	Thr		Lvs	Len	Pro	Va 1		Trp	Pro	Thr	
254	шец	50	1110	110	Cys		55	011	1175	Dea	110	60		1-5	110		
	T 011		mh w	mhm	Dho	Cor		C1**	1/2 l	Cln	Cvc		cor	λνα	Tyr	Dro	
		val	1111	TIII	Pne		IÀI	GTY	Val	GIII	75	Pile	261	AIG	тут		
257	65			_		70	_	_,	_,	_	, ,			_	<b>a</b> 1	80	
	Asp	His	Met	Lys		His	Asp	Phe	Phe		Ser	Ala	Met	Pro	Glu	GTÀ	
260					85					90					95		
262	${ t Tyr}$	Val	Gln	Glu	Arg	Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	
263				100					105					110			
265	Thr	Arg	Ala	Glu	Val	Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	
266		-	115			-		120	_	_			125				
	Glu	Leu		Glv	Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	
269		130	-1-	1		- 1	135			- 1	- 4	140			-		

RAW SEQUENCE LISTING DATE: 05/22/2002 PATENT APPLICATION: US/09/900,345A TIME: 11:27:26

Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\1900345A.raw

271	Lys 1	Lau	Clu	Ttrr	λen	Тиг	λen	Sor	Uic	λen	v∍1	Тагт	Tlo	Mot	λla	λcn	
	145	Leu	Giu	ıyı	ASII	150	ASII	Ser	птэ	ASII	155	1 Y 1	116	Mec	мта	160	
	Lys (	21 n	Two	λαη	C117		Lvc	V = 1	λcn	Dho		Tlo	λνα	uic	λcn		
275	mys (	3111	цуз	ASII	165	116	пÃр	vai	ASII	170	пуъ	116	Aly	птэ	175	TIE	
	Glu A	λcn	C1**	cor		Cln	T ou	λla	7 cn		Птт	Cln	Cln	A an		Dro	
278	GIU 2	nsp	Сту	180	Val	GIII	ьец	Ата	185	птэ	тут	GIII	GIII	190	1111	PIO	
	т10 (	~ 1	7 an		Dro	175.1	T 011	Ton		7 an	A an	uic	Фтт∞		Cor	mbs	
281	Ile (	зту	195	СТУ	PIO	vai	ьеu	200	PIO	ASP	ASII	птэ	205	Leu	ser	1111	
	Cln (	C^~		Ton	Con	T ***	N an		N a n	C1.,	T	7 ~~~		II i a	Mo+	17-1	
284	Gln S	210	Ата	ьeu	ser	гуѕ	215	PIO	ASII	GIU	гуѕ	220	ASP	HIS	мес	Val	
			C1	nho	17 n 1	mb ~		71-	C1	т1 о	mb ~		C1	Wat	7	<b>C1.</b>	
	Leu l	Leu	GIU	Pne	Val		Ald	Ата	СТУ	TTE		HIS	СТУ	мес	ASP		
	225	T	T			230					235					240	
	Leu :				-												
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					32												
	<212				·		1										
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					)RMA'	LION	: Des	scrip	otio	n of	Art:	111C	lal S	Seque	ence	: Ala(	GCG)5GFP
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	<221					. = .											
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	atg g																48
	Met A	Ala	Ala	Ala	_	Ala	Ser	Lys	Gly		Glu	Leu	Phe	Thr	_	Val	
307	1				5					10					15		
	gtc c					_	_	_		_							96
	Val E	Pro	Ile		Val	Glu	Leu	Asp		Asp	Val	Asn	Gly		Lys	Phe	
311				20					25					30			
	tct q																144
	Ser V	Va1		Gly	Glu	Gly	Glu	_	Asp	Ala	Thr	Tyr	_	Lys	Leu	Thr	
315			35					40					45				
	ctg a																192
	Leu I	-	Phe	Ile	Cys	Thr		Gly	Lys	Leu	Pro		Pro	Trp	Pro	Thr	
319		50					55					60					
	ctg g																240
	Leu V	/al	Thr	Thr	Phe		Tyr	Gly	Val	Gln	_	Phe	Ser	Arg	${ t Tyr}$		
323	65					70					75					80	
	gac c																288
	Asp H	lis	Met	Lys		His	Asp	Phe	Phe		Ser	Ala	Met	Pro		Gly	
327					85					90					95		
	tat g																336
	Tyr V	/al	Gln		Arg	Thr	Ile	Phe		Lys	Asp	Asp	Gly	Asn	Tyr	Lys	
331				100					105					110			
	acc c																384
	Thr A	۱rg		Glu	Val	Lys	Phe		Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	
335			115					120					125				
	gag c																432
338	Glu I	Leu	Lys	Gly	Ile	Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/09/900,345A

DATE: 05/22/2002 TIME: 11:27:27

Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\1900345A.raw

## Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:2; Line(s) 107

VERIFICATION SUMMARY

DATE: 05/22/2002

PATENT APPLICATION: US/09/900,345A

TIME: 11:27:27

Input Set : A:\10338\_5US.txt

Output Set: N:\CRF3\05222002\1900345A.raw